

Appl. No. : 09/998,682
Amendment and RCE dated : 07/11/2005
in Reply to Final Office
Action dated : 01/11/2005
Express Mail Label No. : EV604747510US

Attorney Docket No.: 109878.126 US1

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Claim 1 (currently amended) A search and navigation system for retrieving information associated with a set of materials, comprising:

a plurality of attributes characterizing the materials;

a plurality of associations between the materials and a plurality of values describing the materials, wherein each of the values has an association with at least one of the a plurality of attributes characterizing the materials, and each the association defines defining an attribute-value pair;

a plurality of navigation states, wherein each navigation state corresponds to a particular expression of attribute-value pairs and to a particular subset of the materials, wherein for each navigation state the particular subset of the materials corresponding to the navigation state consists of those materials in the navigation system that are each described by every each of the attribute-value pairs pair in the particular expression of attribute-value pairs corresponding to that navigation state characterizes in accordance with the particular expression all of the materials in the particular subset of materials corresponding to that navigation state, and wherein for at least one navigation state the particular expression of attribute value pairs corresponding to that navigation state is a conjunction of at least two mutually incomparable attribute value pairs; and

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wherein at least one navigation state corresponds to a particular expression of attribute-value pairs that is a conjunction and includes a first attribute-value pair having a first attribute, in which the first attribute-value pair does not describe all the materials in the navigation system that the first attribute characterizes, and includes a second attribute-value pair having a second attribute, in which the second attribute-value pair does not describe all the materials in the navigation system that the second attribute characterizes, wherein the first attribute-value pair and the second attribute-value pair are mutually incomparable; and,

a search interface, the search interface including a free-text search tool for accepting free-text queries, the search interface being adapted to generate multi-term interpretations of free-text queries, wherein a multi-term interpretation maps a free-text query to a navigation state that corresponds to a particular expression of attribute-value pairs that is a conjunction of mutually incomparable attribute-value pairs.

Claim 2 (original) The search and navigation system of claim 1, wherein the multi-term interpretations of the free-text query are minimal.

Claim 3 (original) The search and navigation system of claim 1, wherein the search interface supports conjunctive query semantics.

Claim 4 (original) The search and navigation system of claim 1, wherein the search interface supports disjunctive query semantics.

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Claim 5 (original) The search and navigation system of claim 1, wherein the search interface supports customized query semantics.

Claim 6 (original) The search and navigation system of claim 1, wherein the search interface ignores stop words in the free-text query.

Claim 7 (original) The search and navigation system of claim 1, wherein the search interface treats syntactically related words as equivalent.

Claim 8 (original) The search and navigation system of claim 1, wherein the search interface treats semantically related words as equivalent.

Claim 9 (original) The search and navigation system of claim 1, wherein the search interface performs automatic spelling corrections.

Claim 10 (original) The search and navigation system of claim 1, wherein the search interface supports the specification of delimited phrases.

Claim 11 (previously presented) The search and navigation system of claim 1, wherein the search interface supports constraining a search to the subset of materials in the current navigation state where the free-text query is accepted.

Claim 12 (original) The search and navigation system of claim 1, further including a profile for each of the materials in the set of materials, the profile including descriptive information, the free-text search tool enabling searching the descriptive information in the profiles.

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Claim 13 (original) The search and navigation system of claim 1, the search interface further including a full-text search tool for searching the set of materials.

Claim 14 (currently amended) The search and navigation system of claim 44, wherein the set of search results is organized by attribute.

Claim 15 (previously presented) The search and navigation system of claim 44, wherein the set of search results further includes navigation options to the navigation states corresponding to the multi-term interpretations.

Claim 16 (original) The search and navigation system of claim 1, further including a first inverted index relating words to attribute-value pairs and a second inverted index relating attribute-value pairs to materials.

Claim 17 (previously presented) The search and navigation system of claim 1, further comprising a navigation interface, the navigation interface including a guided navigation tool providing a set of navigation options from the current navigation state to one or more other navigation states, each navigation option providing a direct path to one of the one or more other navigation states.

Claim 18 (currently amended) A search and navigation system for retrieving information associated with a set of materials, comprising:

~~a plurality of attributes characterizing the materials;~~

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a plurality of associations between the materials and a plurality of values
describing the materials, wherein each of the values has an association with at least one
of the a plurality of attributes characterizing the materials, and each the association
defines an attribute-value pair;

a plurality of navigation states, wherein each navigation state corresponds to a
particular expression of attribute-value pairs and to a particular subset of the materials,
wherein for each navigation state the particular subset of materials corresponding to the
navigation state consists of those materials in the navigation system that are each
described by every each of the attribute-value pairs pair in the particular expression of
attribute-value pairs corresponding to that navigation state characterizes in accordance
with the particular expression all of the materials in the particular subset of materials
corresponding to that navigation state, and wherein for at least one navigation state the
particular expression of attribute value pairs corresponding to that navigation state is a
conjunction of at least two mutually incomparable attribute value pairs; and

wherein at least one navigation state corresponds to a particular expression of
attribute-value pairs that is a conjunction and includes a first attribute-value pair having a
first attribute, in which the first attribute-value pair does not describe all the materials in
the navigation system that the first attribute characterizes, and includes a second
attribute-value pair having a second attribute, in which the second attribute-value pair
does not describe all the materials in the navigation system that the second attribute

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characterizes, wherein the first attribute-value pair and the second attributc-value pair are mutually incomparable; and

a search interface, the search interface including a free-text search tool for accepting free-text queries, the search interface being adapted to generate single-term and multi-term interpretations of free-text queries, wherein a single-term interpretation maps a free-text query to a navigation state corresponding to a particular expression of attribute-value pairs including only one attribute-value pair, and wherein a multi-term interpretation maps a free-text query to a navigation state corresponding to a particular expression of attribute-value pairs that is a conjunction of mutually incomparable attribute-value pairs.

Claim 19 (original) The search and navigation system of claim 1, wherein the multi-term interpretations of the free-text query are minimal.

Claim 20 (original) The search and navigation system of claim 18, wherein the search interface supports conjunctive query semantics.

Claim 21 (original) The search and navigation system of claim 18, wherein the search interface supports disjunctive query semantics.

Claim 22 (original) The search and navigation system of claim 18, wherein the search interface supports customized query semantics.

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Claim 23 (original) The search and navigation system of claim 18, wherein the search interface ignores stop words in the free-text query.

Claim 24 (original) The search and navigation system of claim 18, wherein the search interface treats syntactically related words as equivalent.

Claim 25 (original) The search and navigation system of claim 18, wherein the search interface treats semantically related words as equivalent.

Claim 26 (original) The search and navigation system of claim 18, wherein the search interface performs automatic spelling corrections.

Claim 27 (original) The search and navigation system of claim 18, wherein the search interface supports the specification of delimited phrases.

Claim 28 (previously presented) The search and navigation system of claim 18, wherein the search interface supports constraining a search to the subset of materials in the current navigation state where the free-text query is accepted.

Claim 29 (previously presented) The search and navigation system of claim 45, wherein the set of search results is organized by attribute.

Claim 30 (previously presented) The search and navigation system of claim 45, wherein the set of search results further includes navigation options to the navigation states corresponding to the multi-term interpretations.

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Claim 31 (original) The search and navigation system of claim 18, further including a first inverted index relating words to attribute-value pairs and a second inverted index relating attribute-value pairs to materials.

Claim 32 (previously presented) The search and navigation system of claim 18, further comprising a navigation interface, the navigation interface including a guided navigation tool providing a set of navigation options from the current navigation state to one or more other navigation states, each navigation option providing a direct path to one of the one or more other navigation states.

Claim 33 (currently amended) A search and navigation system for retrieving information associated with a set of materials, comprising:

~~a plurality of attributes characterizing the materials;~~
~~a plurality of associations between the materials and a plurality of values describing the materials, wherein each of the values has an association with at least one of the a plurality of attributes characterizing the materials, the and each association defines defining an attribute-value pair, and wherein some of the attribute-value pairs refine other of the attribute value pairs;~~

~~a plurality of navigation states, wherein each navigation state corresponds to a particular expression of attribute-value pairs and to a particular subset of the materials, wherein for each navigation state the particular subset of the materials corresponding to the navigation state consists of those materials in the navigation system that are each~~

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described by every each of the attribute-value pairs pair in the particular expression of attribute-value pairs corresponding to that navigation state characterizes in accordance with the particular expression all of the materials in the particular subset of materials corresponding to that navigation state, and wherein for at least one navigation state the particular expression of attribute value pairs corresponding to that navigation state is a conjunction of at least two mutually incomparable attribute value pairs; and

wherein at least one navigation state corresponds to a particular expression of attribute-value pairs that is a conjunction and includes a first attribute-value pair having a first attribute, in which the first attribute-value pair does not describe all the materials in the navigation system that the first attribute characterizes, and includes a second attribute-value pair having a second attribute, in which the second attribute-value pair does not describe all the materials in the navigation system that the second attribute characterizes, wherein the first attribute-value pair and the second attribute-value pair are mutually incomparable; and

a navigation interface, the interface providing a plurality of transitions, each transition providing a direct path between two of the navigation states, wherein each transition represents a change from the expression of attribute-value pairs corresponding to an originating navigation state to the expression of attribute-value pairs corresponding to a destination navigation state, wherein a series of one or more transitions provides a path between any two navigation states; and

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a search interface, the interface including a free-text search tool for accepting free-text queries, the interface being adapted to generate multi-term interpretations for free-text queries, wherein a multi-term interpretation maps a free-text query to a navigation state corresponding to a particular expression of attribute-value pairs that is a conjunction of mutually incomparable attribute-value pairs.

Claim 34 (cancelled).

Claim 35 (cancelled).

Claim 36 (cancelled).

Claim 37 (cancelled).

Claim 38 (cancelled).

Claim 39 (cancelled).

Claim 40 (cancelled).

Claim 41 (cancelled).

Claim 42 (cancelled).

Claim 43 (cancelled).

Claim 44 (previously presented) The search and navigation system of claim 1, wherein the search interface provides a display of a set of search results for a query, the set of search

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results including one or more multi-term interpretations when at least one multi-term interpretation is generated.

Claim 45 (previously presented) The search and navigation system of claim 18, wherein the search interface provides a display of a set of search results for a query, the set of search results including one or more single-term interpretations when at least one single-term interpretation is generated and the set of search results including one or more multi-term interpretations when at least one multi-term interpretation is generated.

Claim 46 (previously presented) The search and navigation system of claim 33, wherein the search interface provides a display of a set of search results for a query, the set of search results including one or more multi-term interpretations when at least one multi-term interpretation is generated.